WHAT IS CLAIMED AS NEW AND DESIRED TO BE SECURED BY LETTERS PATENT OF THE UNITED STATES IS:

1. A method of assembling an optical module, the method comprising the steps of:

measuring an outgoing angle of a light emitted from a light-emitting element; and

orienting said light-emitting element based on said outgoing angle.

2. The method of Claim 1, further comprising the steps of:

detecting a far field pattern (FFP) of a light output from at least one optical component configured to receive said light emitted from said light-emitting element; and

positioning said at least one optical component based on said FFP.

3. The method of Claim 2, wherein the step of detecting comprises detecting at least one of a divergent angle and an axis of said light output from said at least one optical component.

4. The method of Claim 3, wherein the step of positioning said at least one optical component is based on said at least one of said divergent angle and said axis.

5. The method of Claim 2, further comprising the step of fixing the position of said at least one optical component after said positioning step.

6. The method of Claim 5, wherein the step of fixing comprises welding said at least one optical component with a laser.

7. The method of Claim 2, wherein:

the step of detecting the FFP of the light output from said at least one optical component comprises detecting the FFP of the light output from a collimating lens configured to collimate the light emitted from said light-emitting element; and

the step of positioning comprises positioning said collimating lens.

8. The method of Claim 7, wherein:

the step of detecting the FFP of the light output from said at least one optical component comprises detecting the FFP of the light output from a focusing lens configured to focus a collimated light output from said collimating lens; and

the step of positioning comprises positioning said focusing lens.

9. The method of Claim 2, further comprising the steps of:

detecting a near field pattern (NFP) of the light output from said at least one optical component; and

positioning said at least one optical component based on said NFP,

wherein the step of positioning based on said NFP is performed before the step of positioning based on said FFP.

10. A method of assembling an optical module, the method comprising the steps of:

detecting a far field pattern (FFP) of a light output from at least one optical component configured to receive a light emitted from a light-emitting element; and

positioning said at least one optical component based on said FFP.

11. The method of Claim 10, wherein the step of detecting comprises detecting at least one of a divergent angle and an axis of said light output from said at least one optical component.

12. The method of Claim 11, wherein the step of positioning said at least one optical component is based on said at least one of said divergent angle and said axis.

13. The method of Claim 10, further comprising the step of fixing the position of said at least one optical component after said positioning step.

14. The method of Claim 13, wherein the step of fixing comprises welding said at least one optical component with a laser.

15. The method of Claim 10, wherein:

the step of detecting the FFP of the light output from said at least one optical component comprises detecting the FFP of the light output from a collimating lens configured to collimate the light emitted from said light-emitting element; and

the step of positioning comprises positioning said collimating lens.

16. The method of Claim 15, wherein:

the step of detecting the FFP of the light output from said at least one optical component comprises detecting the FFP of the light output from a focusing lens configured to focus a collimated light output from said collimating lens; and

the step of positioning comprises positioning said focusing lens.

17. The method of Claim 10, further comprising the steps of:

detecting a near field pattern (NFP) of the light output from said at least one optical component; and

positioning said at least one optical component based on said NFP,

wherein the step of positioning based on said NFP is performed before the step of positioning based on said FFP.

18. A system for assembling an optical module, the system comprising:

means for measuring an outgoing angle of a light emitted from a light-emitting element; and

means for orienting said light-emitting element based on said outgoing angle.

19. The system of Claim 18, further comprising:

means for detecting a far field pattern (FFP) of a light output from at least one optical component configured to receive said light emitted from said light-emitting element; and

means for positioning said at least one optical component based on said FFP.

20. The system of Claim 19, wherein the means for detecting comprises means for detecting at least one of a divergent angle and an axis of said light output from said at least one optical component.

21. The system of Claim 20, wherein the means for positioning is configured to position said at least one optical component based on said at least one of said divergent angle and said axis.

22. The system of Claim 19, further comprising means for fixing the position of said at least one optical component.

23. The system of Claim 22, wherein the means for fixing comprises a means for welding said at least one optical component.

24. The system of Claim 19, wherein said at least one optical component comprises means for collimating the light emitted from said light-emitting element.

25. The system of Claim 24, wherein said at least one optical component comprises means for focusing a collimated light output from said means for collimating.

26. The system of Claim 19, further comprising:

means for detecting a near field pattern (NFP) of the light output from said at least one optical component; and

means for positioning said at least one optical component based on said NFP,

wherein the means for positioning based on said NFP is configured to position said at least one optical component before the means for positioning positions said at least one optical component based on said FFP.

27. A system for assembling an optical module, the system comprising:

means for detecting a far field pattern (FFP) of a light output from at least one optical component configured to receive a light emitted from a light-emitting element; and

means for positioning said at least one optical component based on said FFP.

28. The system of Claim 27, wherein the means for detecting comprises means for detecting at least one of a divergent angle and an axis of said light output from said at least one optical component.

29. The system of Claim 28, wherein the means for positioning is configured to position said at least one optical component based on said at least one of said divergent angle and said axis.

30. The system of Claim 27, further comprising means for fixing the position of said at least one optical component.

31. The system of Claim 30, wherein the means for fixing comprises a means for welding said at least one optical component.

32. The system of Claim 27, wherein said at least one optical component comprises means for collimating the light emitted from said light-emitting element.

33. The system of Claim 32, wherein said at least one optical component comprises means for focusing a collimated light output from said means for collimating.

34. The system of Claim 27, further comprising:

means for detecting a near field pattern (NFP) of the light output from said at least one optical component; and

means for positioning said at least one optical component based on said NFP,

wherein the means for positioning based on said NFP is configured to position said at least one optical component before the means for positioning positions said at least one optical component based on said FFP.

35. A system for assembling an optical module, the system comprising:

a light-emitting element;

a far field pattern (FFP) optical measurement system configured to measure an FFP of a light output from said light-emitting element; and

a stage configured to orient said light-emitting element based on said FFP.

36. The system of Claim 35, further comprising:

at least one optical component configured to receive said light emitted from said light-emitting element, wherein the FFP optical measurement system is configured to measure an FFP of a light output from said at least one optical component; and

a holding mechanism configured to position said at least one optical component based on said FFP of said light output from said at least one optical component.

37. The system of Claim 36, wherein the FFP optical measurement system is configured to measure at least one of a divergent angle and an axis of said light output from said at least one optical component.

38. The system of Claim 37, wherein the holding mechanism is configured to position said at least one optical component based on said at least one of said divergent angle and said axis.

39. The system of Claim 36, further comprising a fixing mechanism configured to fix the position of said at least one optical component.

40. The system of Claim 39, wherein the fixing mechanism comprises a laser configured to weld said at least one optical component.

41. The system of Claim 36, wherein said at least one optical component comprises a collimating lens configured to collimate the light emitted from said light-emitting element.

42. The system of Claim 41, wherein said at least one optical component comprises a focusing lens configured to focus a collimated light output from said collimating lens.

43. The system of Claim 36, further comprising:

a near field pattern (NFP) optical measurement system configured to measure the NFP of the light output from said at least one optical component; and

wherein the holding mechanism is configured to position said at least one optical component based on said NFP before positioning said at least one optical component based on said FFP.

44. The system of Claim 43, further comprising an optical distributor configured to route said light from said at least one optical component to one of said FFP optical measurement system and said NFP optical measurement system.

45. The system of Claim 35, further comprising a controller configured to:

receive FFP data from said FFP optical measurement system, and

control said stage based on said FFP data.

46. The system of Claim 36, further comprising a controller configured to:

receive FFP data from said FFP optical measurement system, and

control said holding mechanism based on said FFP data.

47. The system of Claim 46, further comprising a fixing mechanism configured to fix the position of said at least one optical component, and

wherein the controller is further configured to control the fixing mechanism.

48. The system of Claim 46, wherein the controller is further configured to:

receive near field pattern (NFP) data from a NFP optical measurement system, and

control said holding mechanism based on said NFP data.

49. A system for assembling an optical module, the system comprising:

a light-emitting element;

at least one optical component configured to receive a light emitted from said light-emitting element;

a far field pattern (FFP) optical measurement system configured to measure an FFP of a light output from said at least one optical component; and

a holding mechanism configured to position said at least one optical component based on said FFP.

50. The system of Claim 49, wherein the FFP optical measurement system is configured to measure at least one of a divergent angle and an axis of said light output from said at least one optical component.

51. The system of Claim 50, wherein the holding mechanism is configured to position said at least one optical component based on said at least one of said divergent angle and said axis.

52. The system of Claim 49, further comprising a fixing mechanism configured to fix the position of said at least one optical component.

53. The system of Claim 52, wherein the fixing mechanism comprises a laser configured to weld said at least one optical component.

54. The system of Claim 49, wherein said at least one optical component comprises a collimating lens configured to collimate the light emitted from said light-emitting element.

55. The system of Claim 54, wherein said at least one optical component comprises a focusing lens configured to focus a collimated light output from said collimating lens.

56. The system of Claim 49, further comprising:

a near field pattern (NFP) optical measurement system configured to measure the NFP of the light output from said at least one optical component; and

wherein the holding mechanism is configured to position said at least one optical component based on said NFP before positioning said at least one optical component based on said FFP.

57. The system of Claim 56, further comprising an optical distributor configured to route said light from said at least one optical component to one of said FFP optical measurement system and said NFP optical measurement system.

58. The system of Claim 49, further comprising a controller configured to:

receive FFP data from said FFP optical measurement system, and

control said holding mechanism based on said FFP data.

59. The system of Claim 58, further comprising:

a fixing mechanism configured to fix the position of said at least one optical component, and

wherein the controller is further configured to control the fixing mechanism.

60. The system of Claim 58, wherein the controller is further configured to:

receive near field pattern (NFP) data from a NFP optical measurement system, and

control said holding mechanism based on said NFP data.

61. A computer program product, comprising:

a computer storage medium and a computer program code mechanism embedded in the computer storage medium for causing a computer to assemble an optical module, the computer program code mechanism comprising:

a first computer code device configured to receive far field pattern (FFP) data of a light output from a light-emitting element; and

a second computer code device configured to control, based on said FFP data, a stage configured to orient said light-emitting element.

62. The computer program product of Claim 61, further comprising:

a third computer code device configured to receive far field pattern (FFP) data of a light output from at least one optical component configured to receive said light emitted from said light-emitting element; and

a fourth computer code device configured to control, based on said FFP data of said light output from said at least one optical component, a holding mechanism configured to position said at least one optical component.

63. The computer program product of Claim 62, further comprising a fifth computer code device configured to calculate based on said FFP data at least one of a divergent angle and an axis of said light output from said at least one optical component.

64. The computer program product of Claim 63, wherein the fourth computer code device is configured to control said holding mechanism based on said at least one of said divergent angle and said axis.

65. The computer program product of Claim 61, further comprising a third computer code device configured to calculate an outgoing angle of said light emitted from said FFP data; and

wherein said second computer code device is configured to control said stage based on said outgoing angle.

66. The computer program product of Claim 61, further comprising a third computer code device configured to control a fixing mechanism configured to fix the position of said at least one optical component.

67. The computer program product of Claim 66, wherein said third computer code device is configured to control a laser.

68. The computer program product of Claim 61, further comprising:

a third computer code device configured to receive near field pattern (NFP) data of said light output from said light-emitting element; and

a fourth computer code device configured to control said stage based on said NFP data.

69. A computer program product, comprising:

a computer storage medium and a computer program code mechanism embedded in the computer storage medium for causing a computer to assemble an optical module, the computer program code mechanism comprising:

a first computer code device configured to receive far field pattern (FFP) data of a light output from at least one optical component configured to receive a light emitted from a light-emitting element; and

a second computer code device configured to control, based on said FFP data, a holding mechanism configured to position said at least one optical component.

70. The computer program product of Claim 69, further comprising a third computer code device configured to calculate based on said FFP data at least one of a divergent angle and an axis of said light output from said at least one optical component.

71. The computer program product of Claim 70, wherein the second computer code device is configured to control said holding mechanism based on said at least one of said divergent angle and said axis.

72. The computer program product of Claim 69, further comprising a third computer code device configured to control a fixing mechanism configured to fix the position of said at least one optical component.

73. The computer program product of Claim 72, wherein said third computer code device is configured to control a laser.

74. The computer program product of Claim 69, further comprising:

a third computer code device configured to receive near field pattern (NFP) data of said light output from said at least one optical component; and

a fourth computer code device configured to control, based on said NFP data, said holding mechanism.